



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

7

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,489	01/29/2004	Hiroyuki Ohnuma	31759-200511	3736
26694	7590	08/09/2007	EXAMINER	
VENABLE LLP			ADAMS, CHARLES D	
P.O. BOX 34385			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20043-9998			2164	
MAIL DATE		DELIVERY MODE		
08/09/2007		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/766,489	OHNUMA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Charles D. Adams	2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 11 May 2007.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1,3-5,10,11,13-15 and 20-28 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1, 3-5, 10-11, 13-15, 20-28 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Remarks***

1. In response to communications filed on 11 May 2007, claims 1, 3-5, 11, and 13-15 are amended, claims 2, 6-9, 12, and 16-19 are cancelled, and claims 21-28 are added per applicant's request. Claims 1, 3-5, 10-11, 13-15, and 20-28 are pending in the application.

### ***Claim Objections***

2. Claims 1, 11, 21, and 25 are objected to because of the following informalities: the claims contain the language "the documents including the named entities as an object to judge a significance". The current wording of this limitation reads as if the named entities are the objects that are judging a significance. However, based on the other limitations and interpreted in the light of the specification, the Examiner believes that a significance of the named entities is being judged. As such, Examiner recommends the inclusion of the word "of" to the end of the objected statement. In addition to this, "named entities" is plural, while "object" is singular. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 11, 21, and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims contain the limitation "whereby the documents having less mutual relevance are given a higher weight value". However, there is no mention of a comparable item that would receive a lower weight value. "Higher" implies a comparison, wherein the weight value given to the "documents having less mutual relevance" is higher than weight values given to something else, yet the claims are absent as to what.

***Claim Rejections - 35 USC § 103***

5. Claims 1, 3, 5, 10-11, 13, 15, and 20-22, 24-26, and 28 rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (US Pre-Grant Publication 2003/0101415) in view of Lee et al. (US Pre-Grant Publication 2003/0195882).

As to claim 1, Chang teaches an evaluation apparatus of named entities included in a document (see Abstract) comprising:

A document weight calculation section which defines a mutual relevance among a plurality of documents, the documents including the named entities as an object to judge a significance (see paragraphs [0065]-[0066] and [0093]), the documents being managed under at least one tree structure (see Figure 6)

Chang does not teach the mutual relevance among the plurality of documents being based on distance among the documents which is defined based on number of nodes or branches among the documents of the tree structure

Lee et al. teaches the mutual relevance among the plurality of documents being based on distance among the documents which is defined based on number of nodes or branches among the documents of the tree structure (see paragraphs [0045] and [0046]. The documents are part of a tree hierarchy for the “huber.lib.edu” site), and

Chang as modified teaches:

Which calculates weight values of said each document based on the mutual relevance whereby the documents having less mutual relevance are given a higher weight value (see Lee et al. paragraphs [0046] and [0047] and Figure 8. Documents higher in the tree have a less in common with all documents lower in the trees. Thus, “huber.lib.edu” has less mutual relevance with nodes  $D_i$  and  $D_j$  than  $D_i$  has with  $D_j$  (as they share “huber.lib.edu/programs”);

An evaluation value calculation section calculating an evaluation value of said named entities by carrying out a calculation process using the weight value of said each document (see Chang paragraphs [0095]-[0097]);

Wherein the significance of the named entities is judged based on the evaluation value where the named entities having a greater evaluation value are given a higher significance (see Chang paragraph [0098]. Elements having a higher weight value are given priority. This is an indication of significance); and

An output section outputting the named entities based on the result of the judged significance (see Chang paragraphs [0061]-[0062] and [0098]-[0101]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Chang by the teaching of Lee et al., since Lee et al. teaches that "the present invention improves a conventional information searching method and allows a page serving as an entry point of a homepage to be searched prior to other documents" (see paragraph [0051]).

As to claim 3, Chang as modified teaches wherein said document weight calculation section gradually increases the weight value of a first document and a second document corresponding to an increment of the number of the nodes of the tree structure common to the first document and the second document (see Lee et al. paragraph [0046]. The weight values of the documents are increased based on the number of nodes underneath them in the tree).

As to claim 5, Chang as modified teaches wherein if a first document and a second document are managed under different trees, said document weight calculation section maximizes the weight value of the first document and the second document (see Chang paragraphs [0070]-[0071], [0089], and [0093]. The root of the tree of documents is maximized, so if there exists another tree that another set of documents is managed under, its weight will be maximized).

As to claim 10, Chang teaches further comprising a document collection section collecting said plurality of document (see Chang paragraphs [0061]-[0062] and [0103]-[0105]); and

A document relevance storage section storing the mutual relevance of the documents collected by said document collection section (see Chang paragraphs [0061]-[0062] and [0098]-[0101]).

As to claim 11, Chang teaches an evaluation method of named entities included in a document (see Abstract) comprising:

A document weight calculation process defining a mutual relevance among a plurality of documents, the documents including the named entities as an object to judge a significance, the documents being managed under at least one tree structure (see paragraphs [0065]-[0066] and [0093], and Figure 6)

Chang does not teach the mutual relevance among the plurality of documents is based on distance among the documents which is defined based on the number of nodes or branches among the documents of the tree structure,

Lee et al. teaches the mutual relevance among the plurality of documents is based on distance among the documents which is defined based on the number of nodes or branches among the documents of the tree structure (see paragraphs [0045] and [0046]. The documents are part of a tree hierarchy for the "huber.lib.edu" site),

Chang as modified teaches:

And calculating the weight values of said each documents based on the mutual relevance whereby the documents having less mutual relevance are given a higher weight value (see Lee et al. paragraphs [0046] and [0047] and Figure 8. Documents higher in the tree have a less in common with all documents lower in the trees. Thus, “huber.lib.edu” has less mutual relevance with nodes  $D_i$  and  $D_j$  than  $D_i$  has with  $D_j$  (as they share “huber.lib.edu/programs”);

An evaluation value calculation process calculating an evaluation value of said named entities by carrying out a calculation process using the weight value of said each document (see Chang paragraphs [0095]-[0097]);

A significance judge process judging a significance of the named entities based on the evaluation value where the named entities having a greater evaluation value are given a higher significance (see Chang paragraph [0098]); and

An output process outputting the named entities based on the result of the judged significance (see Chang paragraphs [0061]-[0062] and [0098]-[0101]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Chang by the teaching of Lee et al., since Lee et al. teaches that “the present invention improves a conventional information searching method and allows a page serving as an entry point of a homepage to be searched prior to other documents” (see paragraph [0051]).

As to claim 13, Chang as modified teaches wherein the weight value of a first document and a second document is gradually increased corresponding to an

increment of the number of the nodes of the tree structure common to the first document and the second document (see Lee et al. paragraph [0046]. The weight values of the documents are increased based on the number of nodes underneath them in the tree).

As to claim 15, Chang as modified teaches wherein if a first document and a second document are managed under different trees, the weight value of the first document and the second document is maximized (see Chang paragraphs [0070]-[0071], [0089], and [0091]).

As to claim 20, Chang teaches further comprising a document collection process collecting said plurality of document (see Chang paragraphs [0061]-[0062] and [0103]-[0105]); and

a document relevance storage process storing the mutual relevance of the documents collected in said document collection process (see Chang paragraphs [0061]-[0062] and [0098]-[0101]),

wherein said document collection process and said document relevance storage process are carried out at least before said document weight calculation process (see Chang paragraph [0062] and [0076]. The calculation of weights is done after the pages are created).

As to claim 21, Chang teaches an evaluation apparatus of named entities included in a document (see Abstract), comprising:

A document weight calculation section which defines a mutual relevance among a plurality of documents, the documents including the named entities as an object to judge a significance (see paragraphs [0065]-[0066] and [0093], and Figure 6), and

Chang does not teach the mutual relevance among the plurality of documents being based on distance among the documents which is defined based on a hierarchical number of a reference relation between the respective documents,

Lee et al. teaches the mutual relevance among the plurality of documents being based on distance among the documents which is defined based on a hierarchical number of a reference relation between the respective documents (see paragraphs [0045] and [0046]. The documents are part of a tree hierarchy for the "huber.lib.edu" site),

Chang as modified teaches:

And calculating weight values of said each document based on the mutual relevance whereby the documents having less mutual relevance are given a higher weight value (see Lee et al. paragraphs [0046] and [0047] and Figure 8);

An evaluation value calculation section calculating an evaluation value of said named entities by carrying out a calculation process using the weight value of said each document (see Chang paragraphs [0095]-[0097]);

wherein the significance of the named entities is judged based on the evaluation value where the named entities having a greater evaluation value are given a higher significance (see Chang paragraphs [0098]); and

An output section outputting the named entities based on the result of the judged significance (see Chang paragraphs [0061]-[0062] and [0098]-[0101]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Chang by the teaching of Lee et al., since Lee et al. teaches that "the present invention improves a conventional information searching method and allows a page serving as an entry point of a homepage to be searched prior to other documents" (see paragraph [0051]).

As to claim 22, Chang as modified teaches wherein said document weight calculation section decreases the weight value of a first document and a second document corresponding to existing a third document which directly or indirectly refers to both of the first document and the second document (see Chang paragraph [0093] and Figure 6. If a document is directly or indirectly referred to by a document above it in the tree structure, its weight will be less than that document).

As to claim 24, Chang as modified teaches wherein if there is no other document referring to a first document, said document weight calculation section maximizes the weight value of the first document (see Chang paragraph [0093] and Figure 6. The top of a tree has its weight maximized).

As to claim 25, Chang teaches an evaluation method of named entities included in a document comprising:

A document weight calculation section process defining a mutual relevance among a plurality of documents, the documents including the named entities as an object to judge a significance (see paragraphs [0065]-[0066] and [0093], and Figure 6), and

Chang does not teach the mutual relevance among the plurality of documents being based on distance among the documents which is defined based on a hierarchical number of a reference relation between said respective documents,

Lee et al. teaches the mutual relevance among the plurality of documents being based on distance among the documents which is defined based on a hierarchical number of a reference relation between said respective documents (see paragraphs [0045] and [0046]),

Chang as modified teaches and calculating weight values of said each document based on the mutual relevance whereby the documents having less mutual relevance are given a higher weight value (see Lee et al. paragraphs [0046] and [0047] and Figure 8);

An evaluation value calculation process calculating an evaluation value of said named entities by carrying out a calculation process using the weight value of said each document (see Chang paragraphs [0095]-[0097]);

A significance judge process judging a significance of the named entities based on the evaluation value where the named entities having a greater evaluation value are given a higher significance (see Chang paragraph [0098]); and

An output process outputting the named entities based on the result of the judged significance (see Chang paragraphs [0061]-[0062] and [0098]-[0101]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Chang by the teaching of Lee et al., since Lee et al. teaches that "the present invention improves a conventional information searching method and allows a page serving as an entry point of a homepage to be searched prior to other documents" (see paragraph [0051]).

As to claim 26, Chang as modified teaches wherein the weight value of a first document and a second document is decreased corresponding to existing a third document which directly or indirectly refers to both of the first document and the second document (see Chang paragraph [0093] and Figure 6. If a document is directly or indirectly referred to by a document above it in the tree structure, its weight will be less than that document).

As to claim 28, Chang as modified teaches wherein if there is no other document referring to a first document, the weight value of the first document becomes maximum (see Chang paragraph [0093] and Figure 6. The top of a tree has its weight maximized).

6. Claims 4 and 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (US Pre-Grant Publication 2003/0101415) in view of Lee et al. (US Pre-Grant Publication 2003/0195882), and further in view of Dean et al. (US Patent 6,138,113).

As to claim 4, Chang as modified teaches an evaluation apparatus as claimed in claim 1.

Chang as modified does not teach wherein said document weight calculation section gradually increases the weight value of a first document and a second document corresponding to an increment of the number of the branches of the tree structure existing between the first document and the second document

Dean et al. teaches wherein said document weight calculation section gradually increases the weight value of a first document and a second document corresponding to an increment of the number of the branches of the tree structure existing between the first document and the second document (see 3:21-25 and 4:65-5:6 and Lee et al. paragraph [0046]. The documents  $D_h$  and  $D_i$  each have their weight values incremented by one because they share a link to  $D_j$ ).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified Chang by the teaching of Dean et al. since Dean et al. teaches "an improved ranking method that can be implemented as part of a search engine. Alternatively, our method can be implemented by one of the clients as part of the Web browser. Our method uses content analysis, as well as

connectivity analysis, to improve the ranking of pages in the result set so that just pages related to a particular topic are identified" (see 3:6-12).

As to claim 14, Chang as modified teaches an evaluation method claimed in claim 11.

Chang as modified does not teach wherein the weight value of a first document and a second document is gradually increased corresponding to an increment of the number of the branches of the tree structure existing between the first document and the second document

Dean et al. teaches wherein the weight value of a first document and a second document is gradually increased corresponding to an increment of the number of the branches of the tree structure existing between the first document and the second document (see 3:21-25 and 4:65-5:6 and Lee et al. paragraph [0046]. The documents  $D_h$  and  $D_i$  each have their weight values incremented by one because they share a link to  $D_j$ ).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified Chang by the teaching of Dean et al. since Dean et al. teaches "an improved ranking method that can be implemented as part of a search engine. Alternatively, our method can be implemented by one of the clients as part of the Web browser. Our method uses content analysis, as well as connectivity analysis, to improve the ranking of pages in the result set so that just pages related to a particular topic are identified" (see 3:6-12).

7. . . Claims 23 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (US Pre-Grant Publication 2003/0101415) in view of Lee et al. (US Pre-Grant Publication 2003/0195882), and further in view of Tsuda (US Pre-Grant Publication 2001/0020238).

As to claim 23, Chang as modified teaches the parent claim.

Chang as modified does not teach wherein said document weight calculation section decreases the weight value of a first document and a second document when the first document directly or indirectly refers to the second document.

Tsuda teaches wherein said document weight calculation section decreases the weight value of a first document and a second document when the first document directly or indirectly refers to the second document (see Figures 9A and 9B and paragraph [0144]. When the links all come from similar addresses, their weight is decreased).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Chang by the teaching of Tsuda, since Tsuda teaches that "By lowering the link weight of a link from a document having a higher URL similarity than a link from a document having a lower URL similarity, a site containing a large amount of document can be prevented from being excessively evaluated as an important site. Thus, important documents can be accurately searched".

As to claim 25, see the rejection of claim 23.

***Response to Arguments***

8. Applicant's arguments with respect to claims 1, 3-5, 10-11, 13-15, and 20-28 have been considered but are moot in view of the new ground(s) of rejection.

In response to Applicant's arguments that "nowhere does Chang disclose" the feature of "the significance determined by an evaluation value that is determined by using the weight value, it is noted that a final score of words is calculated using the weight value of each document. See Figures 8A and 8B, and paragraphs [0097]-[0098].

In response to Applicant's arguments that Dean et al. does not teach the subject matter of claims 1 and 11, it is noted that Dean et al. is not relied upon to teach the subject matter of claims 1 and 11.

### **Conclusion**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles D. Adams whose telephone number is (571) 272-3938. The examiner can normally be reached on 8:30 AM - 5:00 PM, M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Charles Adams  
AU2164

*C. Rones*  
CHARLES RONES  
SUPERVISORY PATENT EXAMINER